

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A conveyor unit comprising:
  - a first belted conveyor section having opposite sidewalls and at least one first roller;
  - a second belted conveyor section having opposite sidewalls and at least one second roller, said conveyor unit having a direction of conveyance from said first belted conveyor section to said second belted conveyor section;
  - at least one continuous conveyor belt defining at least one conveying surface, said at least one continuous conveyor belt being reeved around at least some of said rollers; and
  - an adjustable assembly positioned between said first and second belted conveyor sections, said adjustable assembly comprising a guide roller mounted at and between opposite sides of said adjustable assembly and defining a pivot axis therealong, wherein said adjustable assembly is configured to pivot about said pivot axis and to align said guide roller with said rollers of said belted conveyor sections throughout a range of pivotal adjustment of said adjustable assembly such that an article on said first belted conveyor section does not substantially engage said guide roller of said adjustable assembly as the article is conveyed from said first belted conveyor section to said second belted conveyor section.
2. The conveyor unit of claim 1, wherein said range of pivotal adjustment comprises pivoting said second belted conveyor section relative to said first belted conveyor section between at least approximately five degrees of an incline relative to said first belted conveyor section and at least approximately five degrees of a decline relative to said first belted conveyor section.
3. The conveyor unit of claim 1, wherein said at least one continuous conveyor belt comprises a first continuous belt reeved around said at least two first rollers of said first belted conveyor section and a second continuous belt reeved around said guide roller and said at least one second roller of said second belted conveyor section.
4. The conveyor unit of claim 3, wherein each of said first and second belted conveyor sections includes a driven roller that is rotatably drivable to drive a respective one of said first and second continuous belts.

5. The conveyor unit of claim 4, wherein said driven rollers are operable at different speeds.
6. The conveyor unit of claim 3, wherein said first belted conveyor section is positionable at a decline relative to said second belted conveyor section.
7. The conveyor unit of claim 1, wherein said at least one continuous conveyor belt comprises a single continuous conveyor belt reeved around said guide roller and said at least one first roller and said at least one second roller, said second conveyor section being at a decline relative to said first conveyor section.
8. The conveyor unit of claim 7, wherein said adjustable assembly comprises a lower guide roller positioned generally below said guide roller, said lower guide roller being arranged to guide a lower run of said single continuous conveyor belt between said first and second conveyor sections.
9. The conveyor unit of claim 7, wherein said second belted conveyor section is positionable at a decline relative to said first belted conveyor section.
10. The conveyor unit of claim 1, wherein said adjustable assembly comprises a pair of adjustable connectors adjustably mounted to opposite sidewalls of said first and second conveyor sections.
11. The conveyor unit of claim 10, wherein each of said adjustable connectors comprises a first connecting link extending from one end of said connector and a second connecting link extending from an opposite end of said connector, said first and second connecting links being securable to said sidewalls of respective ones of said first and second belted conveyor sections to connect said first and second belted conveyor sections to said connectors, said first and second connecting links being pivotable about said pivot axis relative to said connectors to align said connecting links with said sidewalls of said first and second belted conveyor sections throughout said range of pivotal adjustment of said adjustable assembly.

12. The conveyor unit of claim 11, wherein at least one of said connecting links is adjustably securable to said sidewalls to accommodate angular adjustment of said belted conveyor sections.

13. The conveyor unit of claim 11, wherein said first and second connecting links comprise first and second upper connecting links and first and second lower connecting links, said first and second upper connecting links being securable to upper portions of said respective sidewalls and said first and second lower connecting links being securable to lower portions of said respective sidewalls.

14. The conveyor unit of claim 13, wherein at least one of said first and second lower connecting links is adjustably securable to said lower portions of said respective sidewalls to accommodate angular adjustment of said sidewalls about said pivot axis.

15. The conveyor unit of claim 1, wherein at least one of said first and second belted conveyor sections includes a driven roller that is rotatably drivable to drive a respective one of said first and second continuous belts.

16. The conveyor unit of claim 15, wherein said driven roller comprises a motorized roller having an internal motor that is operable to rotatably drive a roller portion of said roller relative to a shaft portion of said roller.

17. An adjustable assembly for connecting adjacent belted conveyor sections, the adjacent belted conveyor sections being angularly positionable relative to one another, said adjustable assembly comprising:

a pair of adjustable connectors and a roller mounted to and positioned between said pair of adjustable connectors, each of said adjustable connectors comprising:

a body positionable between the opposed ends of the respective sidewalls of the adjacent belted conveyor sections, said body including a shaft receiving aperture for receiving a shaft end of said roller; and

a first connecting link extending from one end of said body and a second connecting link extending from an opposite end of said body, said first and second connecting links being pivotable about a pivot axis relative to said body to align with the respective sidewalls of the respective adjacent belted conveyor sections, said pivot axis being

generally coaxial with said shaft receiving aperture, said first and second connecting links being securable to the respective belted conveyor sections to connect the belted conveyor sections to said body.

18. The adjustable assembly of claim 17, wherein said body of said connectors are configured to generally align said roller with the rollers of the adjacent belted conveyor sections throughout a range of angular adjustment of said adjustable assembly when said first and second connecting links are secured to the respective belted conveyor sections.

19. The adjustable assembly of claim 18, wherein said range of angular adjustment comprises pivoting said adjustable assembly to align with a belted conveyor section that is between at least approximately five degrees of an incline relative to the other belted conveyor section and at least approximately five degrees of a decline relative to the other belted conveyor section.

20. The adjustable assembly of claim 18, wherein said adjustable assembly is configured to position first and second conveyor sections so that said roller comprises a roller for a continuous belt of a downstream belted conveyor section and is aligned with the rollers of an upstream belted conveyor section such that an article on the upstream belted conveyor section does not substantially engage said roller of said adjustable assembly as the article is conveyed from the upstream belted conveyor section to the downstream belted conveyor section.

21. The adjustable assembly of claim 17, wherein said first and second connecting links comprise first and second upper connecting links positioned at an upper portion of said body and configured to secure to upper portions of the respective belted conveyor sections.

22. The adjustable assembly of claim 21 including first and second lower connecting links at opposite ends of said body and pivotable about a second axis relative to said body to align with lower portions of the respective belted conveyor sections.

23. The adjustable assembly of claim 17, wherein said connecting links are adjustably securable to the respective belted conveyor sections to accommodate angular adjustment of said connecting links about said pivot axis and a corresponding angular adjustment of the belted conveyor sections.

24. The adjustable assembly of claim 17, wherein said adjustable assembly is positionable between a generally horizontal conveyor section and an inclined conveyor section, a continuous belt of the inclined conveyor section being reeved around said roller at said shaft receiving aperture, the inclined conveyor section being downstream of the generally horizontal conveyor section.

25. The adjustable assembly of claim 17, wherein said adjustable assembly is positionable between a declined conveyor section and a generally horizontal conveyor section, a continuous belt of the generally horizontal conveyor being reeved around said roller at said shaft receiving aperture, the generally horizontal conveyor being downstream of the declined conveyor.

26. The adjustable assembly of claim 17, wherein said adjustable assembly is positionable between a generally horizontal conveyor section and a declined conveyor section, the declined conveyor section being downstream from the generally horizontal conveyor section, whereby a single continuous belt is reeved around the rollers of both sections and over said roller at said shaft receiving aperture.

27. The adjustable assembly of claim 26, wherein said body of each of said adjustable connectors includes a second shaft receiving aperture positioned generally below said first shaft receiving aperture, said second shaft receiving apertures receiving an axle shaft of a guide roller for guiding a lower run of the continuous belt along and between the belted conveyor sections.

28. The adjustable assembly of claim 17, wherein said roller comprises a driven roller operable to drive the continuous belt of at least one of the conveyor sections.

29. A conveyor unit comprising:

a first belted conveyor section having a first continuous belt reeved over and around at least two rollers;

a second belted conveyor section having a second continuous belt reeved over and around at least two rollers; and

an adjustable assembly configured to accommodate angular adjustment between said first and second belted conveyor sections, said adjustable assembly positioning said first and second belted conveyor sections so that one of said rollers of said second belted conveyor section is aligned with said at least two rollers of said first belted conveyor section in a direction of conveyance of said conveyor from said first belted conveyor section to said second belted conveyor section such that an article on said first belt of said first belted conveyor section does not substantially engage said aligned roller of said second belted conveyor section as the article is moved from said first belt of said first belted conveyor section onto said second belt of said second belted conveyor section.

30. The conveyor unit of claim 29, wherein said one of said rollers is aligned with said rollers of said first belted conveyor section throughout a range of angular adjustment of said adjustable assembly.

31. The conveyor unit of claim 29, wherein said second belted conveyor section is at an incline relative to said first belted conveyor section.

32. The conveyor unit of claim 29, wherein said first belted conveyor section is at a decline relative to said second belted conveyor section.

33. The conveyor unit of claim 29, wherein said adjustable assembly is configured to mount one of said rollers of said second belted conveyor section.

34. The conveyor unit of claim 29, wherein said adjustable assembly is pivotable about a pivot axis generally orthogonal to said direction of conveyance.

35. The conveyor unit of claim 34, wherein said adjustable assembly is configured to mount one of said rollers of said first and second belted conveyor sections generally along said pivot axis.

36. The conveyor unit of claim 35, wherein said adjustable assembly comprises a pair of angular connectors configured to attach to opposite sidewalls of said conveyor sections.

37. The conveyor unit of claim 36, wherein each of said angular connectors comprises a body portion that includes at least one mounting arm pivotally attached to said body portion and extending from each end of said body portion, said mounting arms being connectable to a respective one of said first and second belted conveyor sections.

38. The conveyor unit of claim 37, wherein said mounting arms are pivotable about said pivot axis to adjust said first and second belted conveyor sections relative to one another.

39. The conveyor unit of claim 38, wherein said mounting arms are adjustably connectable to the respective belted conveyor section to accommodate relative angular adjustment of said belted conveyor sections about said pivot axis.

40. The conveyor unit of claim 29, wherein at least one of said first and second belted conveyor sections includes a driven roller that is rotatably drivable to drive a respective one of said first and second continuous belts.

41. The conveyor unit of claim 40, wherein each of said first and second belted conveyor sections includes a driven roller that is rotatably drivable to drive a respective one of said first and second continuous belts, said driven rollers of said first and second belted conveyor sections being operable at different speeds.

42. The conveyor unit of claim 41, wherein said driven roller comprises a motorized roller having an internal motor that is operable to rotatably drive a roller portion of said roller relative to a shaft portion of said roller.